OM 371T/C

- **3 3/4 digit projection**
- **J, K, T, E, B, S, R, N**
- **Aut. compensation of cold junctions**
- **Dual comparator**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Extension

Data output • Universal analogue output • Power supply: 24 VAC, 110 VAC, 8...32 VDC

Description

The OM 371T/C model is a 3 3/4 digit panel thermometer for thermocouples J, K, T, E, B, S, R and N.
The instrument is based on an 8-bit μ-controller with precise A/D converter, that secures high accuracy, stability and easy operation of the instrument.

Standard functions

Programmable input

Type	J, K, T, E, B, S, R and N

Compensation of cold junctions

Type	manual or automatic also performed in „CM" may be the selection of the type of thermocouple and of compensation of cold junctions, which is adjustable (0...98 °C) according to temperature in the compensation box or automatic, according to temperature of input brackets of the instrument

Digital filters

Radius of insensitiv.	band of suppressed change of measured value

Function

Tare	resetting display upon non-zero input signal

External control

Hold	display/instrument blocking
Lock	control keys blocking

Output

Limits	2 relays with switching contact, The limit has both adjustable hysteresis and optional delay of the switch-on. Reaching the limits is signalled by LED and at the same time by the switch-on of the relevant relay.

Operation

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

Configuration menu	(hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting
User menu	may contain arbitrary programming settings defined in „CM" with another selective restriction (see, change)

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off). The display shows the measured units (°C).

Options

Data outputs are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the ASCII protocol.
Analogue outputs will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analogue output with the option of selection of the type of output - voltage/current. The value of analogue output corresponds with the displayed data and its type and range are selectable in programming mode.

Technical data

MEASURING RANGE

Type:	J (Fe-CuNi)	0°...900°C
	K (NiCr-Ni)	0°...1 300°C
	T (Cu-CuNi)	0°...400°C
	E (NiCr-CuNi)	0°...690°C
	B (PtRh30-PtRh6)	300°...1 820°C
	S (PtRh10-Pt)	0°...1 760°C
	R (Pt13Rh-Pt)	0°...1 740°C
	N (Omegalloy)	0°... 1300°C

PROJECTION

Display:	-999...3999, red or green 14-segment LED, digit height 14 mm
Decimal point:	fixed
Brightness:	adjustable - in Configuration/User menu

INSTRUMENT ACCURACY

Tempco:	50 ppm/°C
Accuracy:	±0,2 % of range
Rate:	1,3 - 2,5 - 5 - 10 - 20 - 40 measurements/s
Comp.of cold junc.:	adjustable 0°...98°C or automatic
Resolution:	1°C
Watch-dog:	reset after 1,2 s
Function:	Hold/Lock (upon contact)
	Digital filter - adjustable in Configuration menu
Calibration:	at 25°C and 40 % r.h.

COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 10 ms
Limit 1 and 2	-999...3999
Hysteresis:	0...999
Delay:	0...99,9 s
Outputs:	2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A)
	- the relay function is adjustable in Configuration menu
	upon request the output may be fitted with SSR (250 VAC, 1 A)

DATA OUTPUTS

Data format:	rate 600...115 200 Baud
	8 bit + no parity + 1 stop bit (ASCII)
RS 232	isolated
RS 485	isolated, addressing (max. 31 instruments)

ANALOGUE OUTPUTS

Type:	isolated, programmable with resolution max. 14 bit, analogue output corresponds with displayed data, output type and range are selectable in CM
Non-linearity:	0,2 % of range
Tempco:	100 ppm/°C
Rate:	response to change of value < 100 ms
Voltage:	0...2 V/5 V/10 V
Current:	0...5 mA/0/4...20 mA (compensation of conduct up to 600 Ohm)

POWER SUPPLY

	24/110/230 VAC/50 Hz
	8...32 VDC/max. 300 mA, (24 VDC/max. 150 mA), isolated

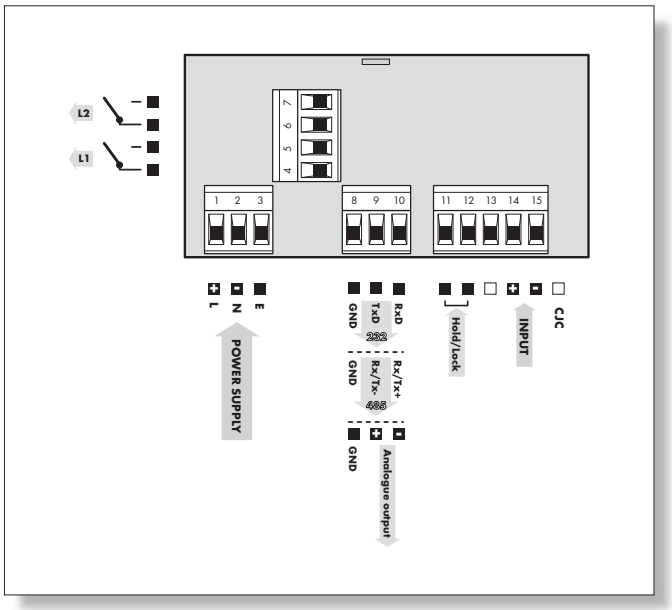
MECHANIC PROPERTIES

Material:	Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions:	96 x 48 x 120 mm
Panel cut-out:	90,5 x 45 mm

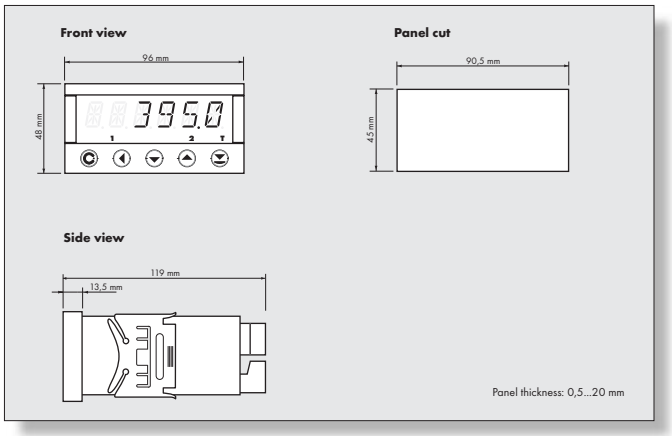
OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 2,5 mm^2
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C
Storage temperature:	-10°...85°C
Covering:	IP65 (front panel only)
Construction:	safety class I
Electrical safety:	EN 61010-1, A2
Overvoltage category:	for pollution degree II
	III. - instrument power supply, relay outputs (300 V)
	II. - input, output (300 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

Connection



Dimensions



Order code

OM 371T/C - xxx

Power supply
0: 24 VAC/50 Hz
1: 230 VAC/50 Hz
3: 110 VAC/50 Hz
4: 8...32 VDC, isolated

Display color
1: red
2: green

Output
0: no
1: Analogue
2: Data - RS 232
3: Data - RS 485

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